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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,951	10/02/2003	Jun Mitadera	396.43162X00	5902
20457	7590	07/13/2006		
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			EXAMINER ZEMEL, IRINA SOPJIA	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/675,951	Applicant(s) MITADERA ET AL.	
	Examiner Irina S. Zemel	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3-2-04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I in the reply filed on 4-24-2006 is acknowledged. It is noted that the applicants indicated claims 1-16 as corresponding to the elected invention Group I on page 1 of their response. This is incorrect since the invention Group I includes only claims 1-13 as indicated in the previous office action. The applicants response is considered as containing an inadvertent error and as an election of Group I, claims 1-13. The traversal is on the ground(s) that the composition claimed in Group II, claims 14 and 15 can not be made by a materially different process such as simultaneous mixing of the components, and that the technical feature of the processing the composition is common for all invention groups and thus the search for all groups would not constitute undue burden on the examiner. This is not found persuasive because there is no evidence on the record that a different compositions are necessarily are obtained by simultaneous mixing of the components, moreover, different processes, such as pre-mixing components A1 and B in an extruder and then adding A2 in several steps also results in the claimed composition. The arguments of the common feature in all of the claims is irrelevant since it does not address the examiner reasons why the inventions of Groups I, II and II are different. The classification of the claimed invention is clearly different and, therefore, the searches for different groups are not coextensive.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGP2001/0056148 to Sato et al., (hereinafter "Sato") in combination with US Patent 4,857,600 to Gross, et al., (hereinafter "Gross").

Sato reference discloses a process of making composite polyamide compositions that comprises mixing a layered (organized) clay with a xylylene diamine/adipic acid polyamide (MXD6) with viscosity corresponding to the claimed viscosity [0020] in one twin screw extruder that contains reverse screw element for the time and temperature corresponding to the conditions of the first section of the claimed extruder [0032-33], and a second step of mixing the resulting composition with MXD<sup>A</sup> in a second extruder operating at the conditions similar to the conditions/configuration of the second part of the claimed extruder. Note that components A1 and A2 as claimed are indistinguishable from each other as having the same compositions and overlapping viscosities.

The Sato reference does not specifically disclose blending components A1, A2 and B in a single extruder having two feeding portals and two mixing and kneading sections, where the A1 component and B components are added through the first feeding port and melt-mixed in the first mixing section and the A2 components are then added through the second feeding port and the entire blend is then melt mixed in the

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second mixing section. Rather the Sato reference discloses two separate extruders for melt mixing components A1 and B, and then mixing the resulting masterbatch with components A2 in the second extruder. The configuration of the first and the second extruders disclosed by the Sato reference and the operating conditions in each of the two extruders disclosed by Sato closely correspond to the configuration (twin extruders, screws, reverse disks, etc., ) of each of the sections of the single extruder claimed in the instant application. It is the examiners position that combining steps performed in two separate extruders in one extruder that combines substantially the same configuration as the separate extruders (which single extruders with multiple feeding ports and mixing sections are well known in the art) and achieves substantially the same results as two separate extruders, would have been obvious with reasonable expectation of adequate results and since it has been long established by the court that making separate part integral for the same purpose or making a process continuous is obvious. Furthermore, the apparatus and process using multi-feeding port, multixinding sections, back feeding section, and ALL other limitations of the extruder itself claimed in the instant claims, are well known in the art of polymer extrusion and compounding to achieve the desired degree of mixing/compounding of the components. See for example, discussion in Gross, column 2-4 for various known extrusion processes that involve multi-feeding port extruders similar to the claimed extruders. Thus, the difference between the process disclosed in the prior art, i.e., Sato, that involves two extruder mixing of components, namely A1 and B in one extruder and subsequent mixing of the resulting batch in the second extruder with components A2 as compared

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to the claimed process that involves only one extruder having two different feeding/mixing areas is trivial and modification of the Sato process from two extruder process to one extruder process would have been obvious as per discussion above absent showing of unexpected results that can be clearly attributed not to the change of sequence of mixing (as contented in the traversal of the restriction requirement), but to the use of specified single extruder as compared to two extruders performing the same function in the same sequence. No such showings are presented on the record at this time.

Thus, the invention as claimed would have been obvious from the teachings of the cited prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Irina S. Zemel  
Primary Examiner  
Art Unit 1711

A handwritten signature in black ink, appearing to read 'Irina S. Zemel', written in a cursive style.

ISZ